

Date _____

EXPERIMENT No: 2

Day _____

OBJECT:-

An introduction to microbiological laboratory equipment.

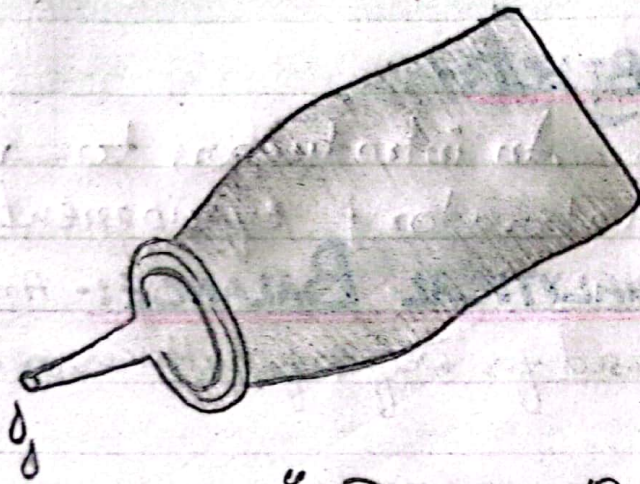
1: ANALYTICAL BALANCE:- An analytical balance is used for weighing culture media and chemicals.

2: AUTOCCLAVE:- An autoclave is a steel made vertical cylinder with a heavy lid. The lid fastens by radial swing bolts. To make the inner chamber air tight. It is fitted with a steam outlet hole. Pressure gauge marked in pounds and degree centigrade, and safety valve which can be set at any pre-determined pressure. The principle of autoclave is steam under pressure. commonly a pressure of 15 lbs/sq. inch is set by generating steam in the chamber.

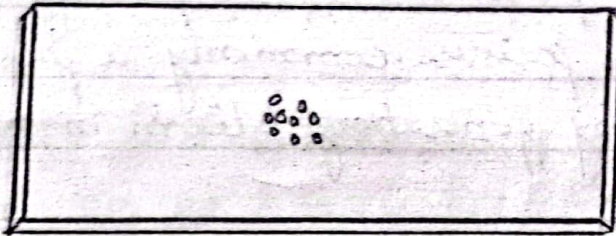
3: BEAKERS:- Beakers, available in different sizes, have many general uses in microbiology laboratory.

4: CONICAL FLASKS:- The conical flasks are useful in the preparation of media particularly for heating, boiling, and sterilizing fluids and culture media.

5: CYLINDER:- The cylinders are used for measuring various fluids required in preparation for media.



"DROPPING BOTTLE"

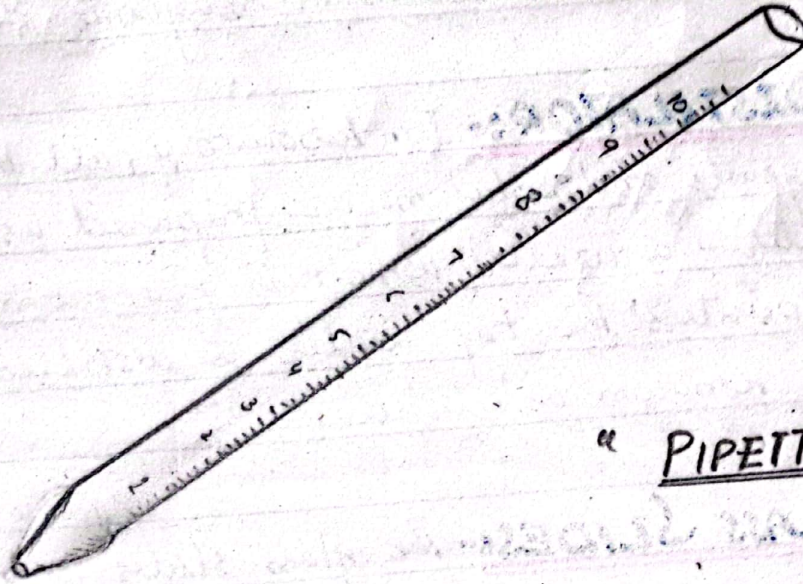


"GLASS SLIDE"

Date _____

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- 6: **DROPPING BOTTLES:-** The dropping bottles are used to deliver stains or reagents in drops.
- 7: **DISTILLATOR:-** In laboratory, all the culture media, reagents and solutions are prepared using distilled water - a water which is free from chemical impurities. The tap water is distilled in an apparatus known as distillator.
- 8: **GLASS SLIDES:-** The glass slides are used for staining smeared culture or for the preparation of wet mount.
- 9: **HOT-AIR OVEN:-** It is a double walled steel chamber used to sterilize test tubes, pipettes, petri plates, cotton swabs etc. The working temperature of hot air oven is 160°C that sterilizes the objects in 90 minutes.
- 10: **INCUBATOR:-** All micro-organisms grow in a particular temperature ranging from minimum to maximum. The temperature at which maximum growth occurs is called optimum temperature. The temperature is thermostatically controlled.



" PIPETTE "



" TEST TUBE "

Date _____

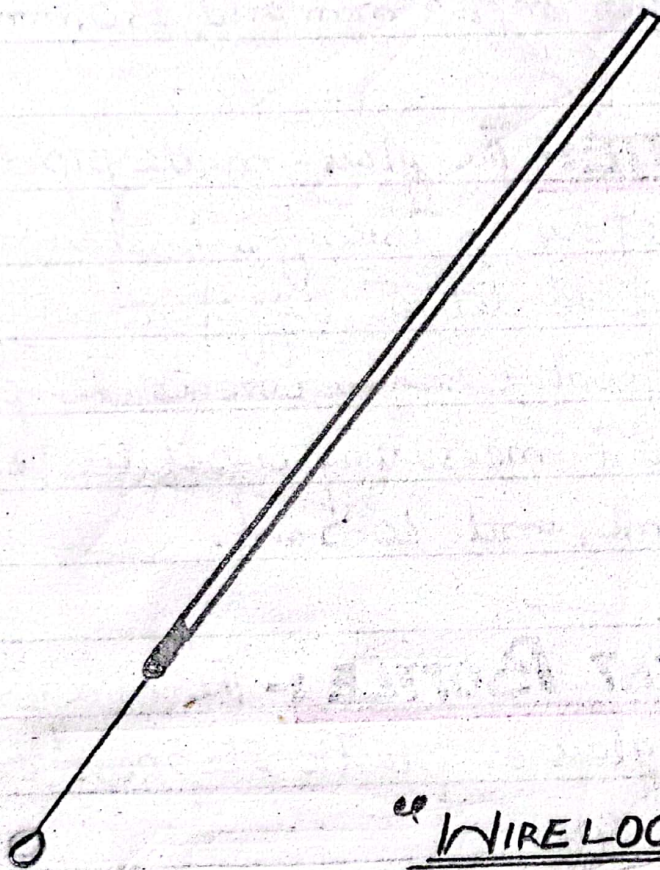
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PETRI PLATE:- A petri plate consists of a bottom dish portion and a large top portion or the lid. The dish contains the medium and the lid serves as a loose cover. For routine microbial cultivation, dishes 80mm, 90mm, 100mm and 150mm in diameter.

PIPETTE:- The glass-made pipette are used in the laboratory as transfer instruments. They are calibrated to deliver different volumes depending on experimental requirements. The pipette are available in different measuring capacities, such as 0.1ml, 1.0ml, 5.0ml, and 10.0ml.

REAGENT BOTTLE:- The reagent bottles have ground glass or plastic stoppers and are made of different sizes.

TEST TUBES:- Test tubes of varying sizes are used in laboratory for a variety of purposes such as preparing slopes of agar media, performing various biochemical test dispensing different fluid media.



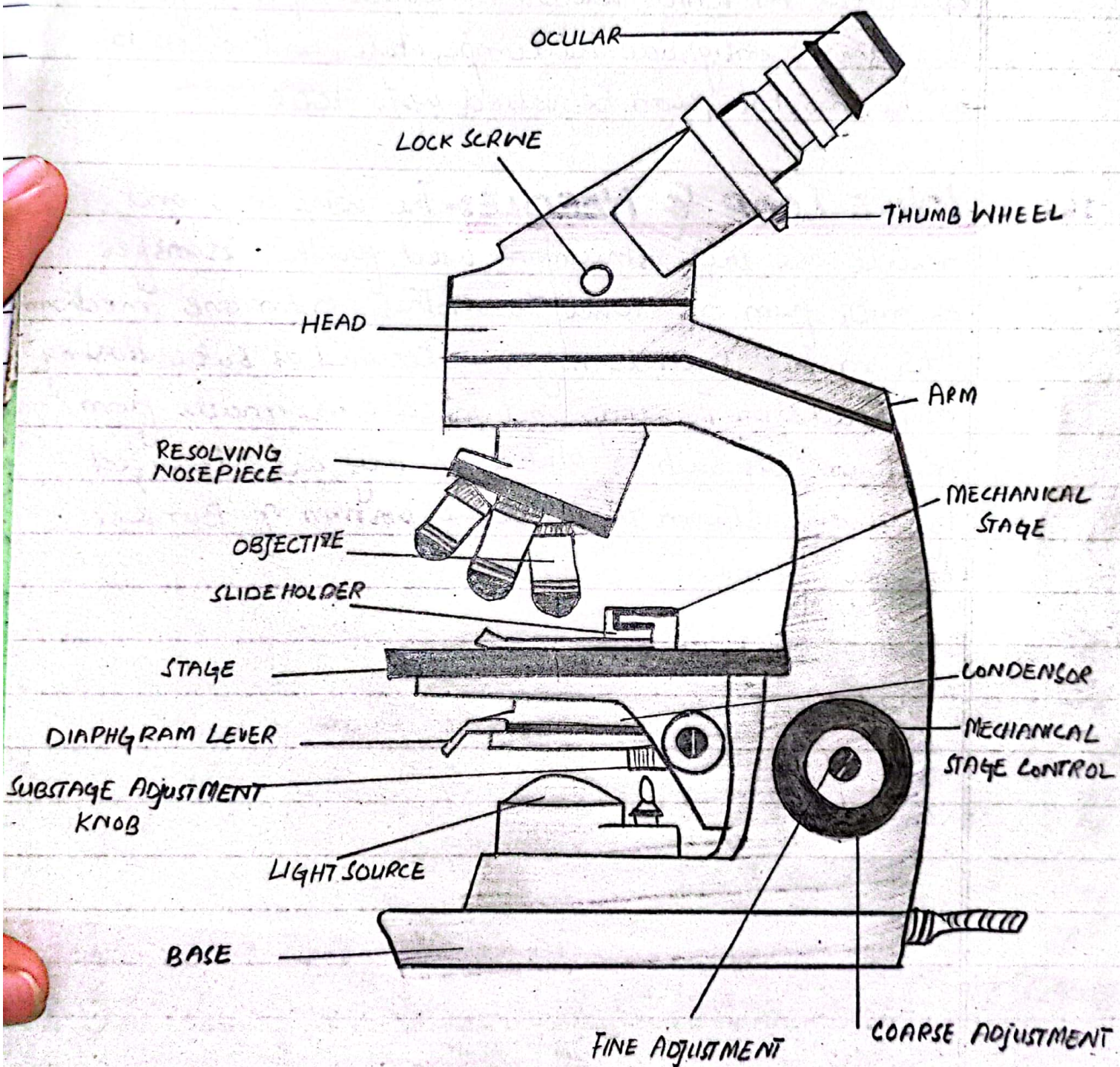
"WIRE LOOP"

15:

WATER BATH:- A water bath is an essential apparatus in which water is heated upto required degree of centigrade. The temperature, controlled by a thermostat, can be raised upto 100°C .

16:

WIRE LOOP & NEEDLE:- The wire loop and needle are the instrument used for the transfer of m.o.s from one vessel to another, from one medium to another. Such transfer is termed as subculturing or inoculation. The loop and needle are made from inert metals such as platinum. They are sterilized by burning them in the blue portion of Bunsen burner flame.



"THE COMPOUND MICROSCOPE"